

In the Claims:

This listing of the claims will replace all prior versions.

1 to 3. (cancelled)

4. (currently amended) A method for producing a molecular array ~~wherein molecules on the array can be individually resolved~~ which method comprises:

(i) providing a molecular array comprising a plurality of functional molecules immobilised to a solid phase at a density which allows individual immobilised molecules to be individually resolved, wherein each molecule in the array is spatially addressable and the identity of each molecule is known or determined prior to immobilisation ~~of known identity immobilised to a solid phase~~; and

(ii) labeling only a portion of functional immobilised molecules ~~in~~ on the array such that remaining labeled individual functional immobilised molecules are spatially addressable and capable of being individually resolved by optical methods.

5 to 15. (cancelled)

16. (previously presented) The method according to claim 4 wherein the label can be read by optical methods.

17. (previously presented) The method according to claim 16 wherein the label is a single fluorescent molecule, nanoparticle or nanorod, or one of a plurality of fluorescent molecules, nanoparticles or nanorods.

18 to 19. (cancelled)

20. (previously presented) The method according to claim 4 wherein the molecules are selected from defined chemical entities, oligonucleotides, polynucleotides, peptides, polypeptides, conjugated polymers, small organic molecules or analogues, mimetics or conjugates thereof.

21. (previously presented) The method according to claim 20 wherein the molecules are cDNA and/or genomic DNA.

22 to 24. (cancelled)

25. (previously presented) The method according to claim 4 wherein each of the labeled immobilised molecules in step (ii) are immobilised onto a single electrode.

26. (previously presented) The method according to claim 25 wherein the electrode transduces a signal when a target molecule binds to the labeled immobilised molecule present on the electrode.

27 to 126. (canceled)